



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,928	04/01/2004	Kerry D. Hinson	60680-1780	2927

68459 7590 07/10/2007  
MARSHALL & MELHORN, LLC  
FOUR SEAGATE  
8TH FLOOR  
TOLEDO, OH 43804

EXAMINER
----------

MITCHELL, KATHERINE W

ART UNIT	PAPER NUMBER
----------	--------------

3677

MAIL DATE	DELIVERY MODE
-----------	---------------

07/10/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/708,928

Applicant(s)

HINSON ET AL.

Examiner

Katherine W. Mitchell

Art Unit

3677

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3,5-8 and 11-19 is/are pending in the application.
- 4a) Of the above claim(s) 13-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-8 and 11-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Rule 105 Request***

1. The scope of 37 CFR 1.105 is extended to any assignee because the information required may be known to some members of the assignee even if not known by the inventors.

The authority for the Office to make such requirements arises from the statutory requirements of examination pursuant to 35 U.S.C. 131 and 132. An examiner or other Office employee may make a requirement for information reasonably necessary to the examination or treatment of a matter in accordance with the policies and practices set forth by the Director(s) of the Technology Center or other administrative unit to which that examiner or other Office employee reports.

Examiner is requesting any written descriptions or analyses, prepared by any of the inventors or assignees, of goods or services in competition with the goods or services the claimed subject matter has been embodied in. Specifically, examiner requests the information on the structural features of the conventional fastener assembly described in paragraphs [0002, 0003, and 0017-0019] used in the pressurization test (Fig 3), the standoff test (Fig 5) and the transmissibility test (Fig 6) of the disclosure; specifically, did the conventional fastener assembly include the fastener, retention sleeve, and engine cylinder/ valve head cover structure as is claimed with the wave spring assembly? Also, examiner requests any printed information on the threaded fastener and retention sleeve from ITW Automotive Products GmbH & Co of Iserlohn, Germany ( para [0015])

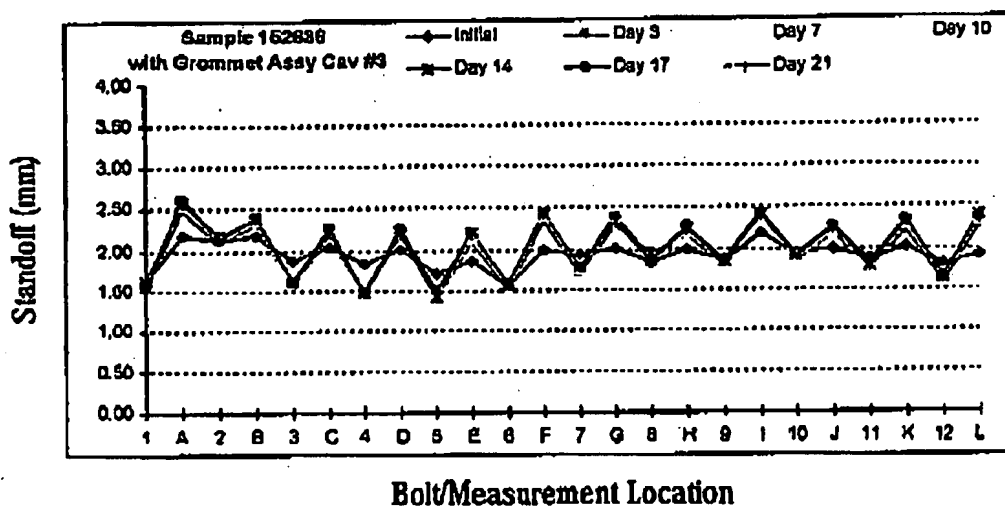


FIG. 3

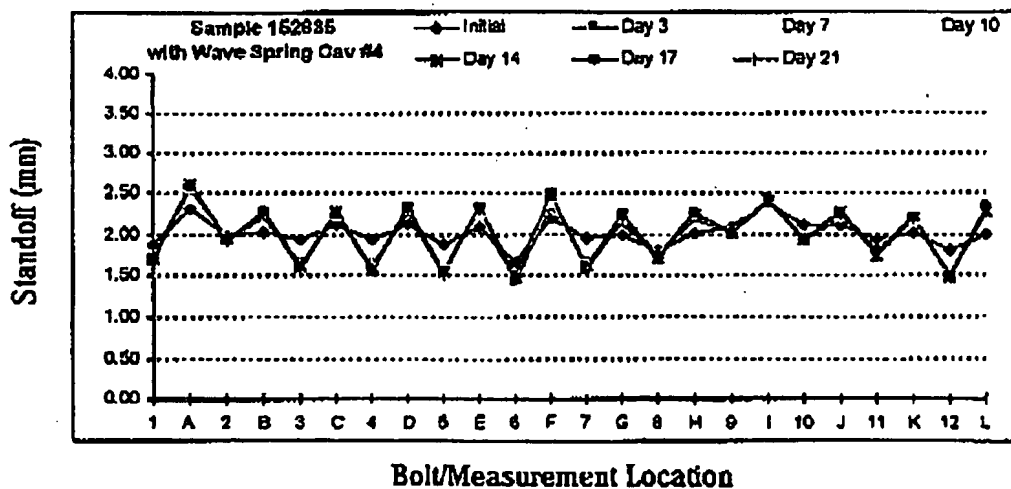


FIG. 4

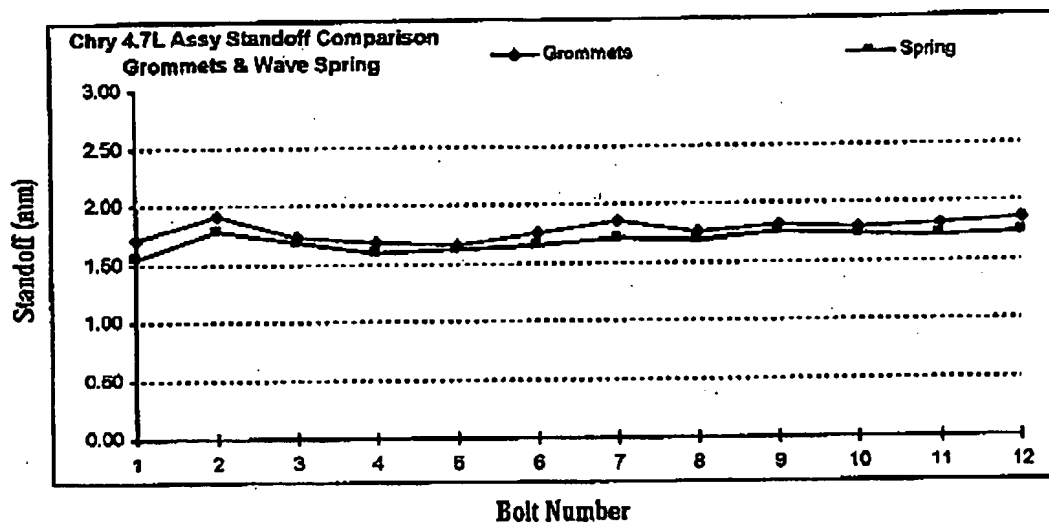


FIG. 5

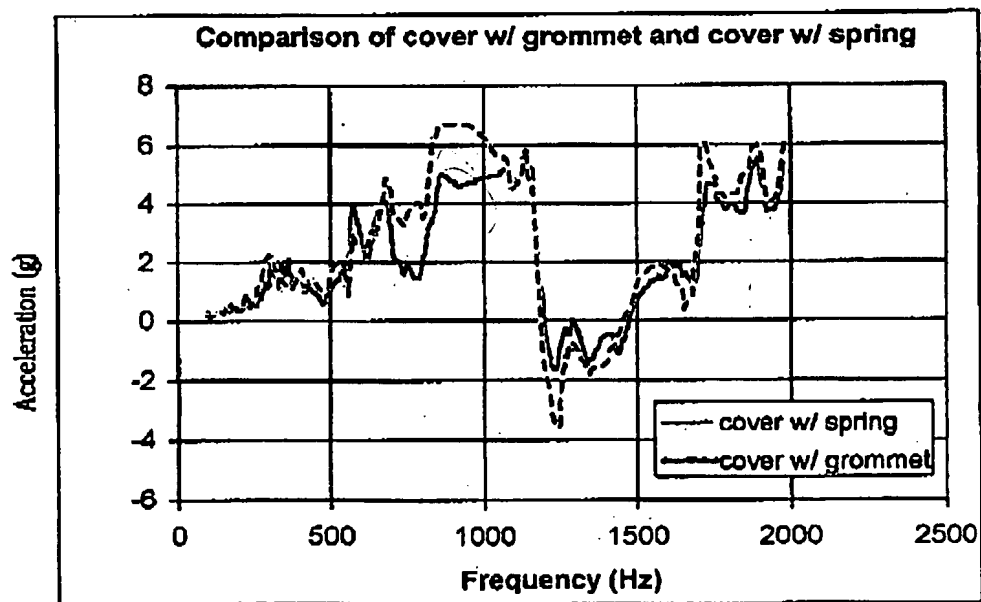


FIG. 6

Art Unit: 3677

2. Please note the examiner of record has changed. Contact information is at the end of this action. This action is non-final.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1,3,5-8,11-12 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AARP) in view of Spirolox Compression Wave Springs, hereafter called Spirolox. Applicant has admitted that conventional fastener assemblies are known, and that the inventive step was replacing the rubber grommet of conventional assemblies with a wave spring. Since the graphs describe the performance difference between rubber grommets and wave springs when used with the same fastener assemblies, obviously the other properties, including the fastener and retention sleeve of metallic metal, fastener head having a radially projecting collar, and retention sleeve details, would remain the same, or the differences could not be attributed to the use of wave springs vs. rubber grommets. Examiner takes Official Notice that metallic fastener assemblies are the most common fastener assemblies for engine components, and notes that Spirolox discloses the wave springs as made of various metals. Wave Springs are well known in the fastener art, as documented by Spirolox, which describes the advantages of wave springs as including reduced space requirements, more precise load deflection characteristics, and smaller

resulting assemblies - all desirable features in coupling a valve cover to a cylinder head of an engine, where weight is important and clearances can be very tight. Further, the wave springs are available in stainless steel where corrosion is considered a likely problem. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have modified AAPA in view of Spirolox to use accepted and known wave springs to minimize weight, improve load deflection characteristics, and allow repeated cycling in high temperature environments. Examiner takes Official Notice that multiple fasteners for coupling valve covers and cylinder heads are commonly used, and page 4 of Spirolox shows multiple wave springs used as a set, as is known in the art.

#### ***Conclusion***

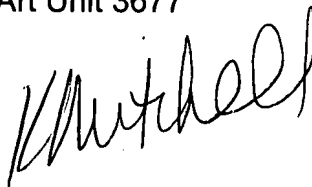
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine W. Mitchell whose telephone number is 571-272-7069. The examiner can normally be reached on Mon - Thurs 10 AM - 8 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J. Swann can be reached on 571-272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3677

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Katherine W Mitchell  
Primary Examiner  
Art Unit 3677



Kwm  
6/25/2007